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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/272,069	03/18/1999	DAVID I.J. GLEN	0100.9900340	5165

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EXAMINER
HARRISON, CHANTE E

ART UNIT	PAPER NUMBER
2677	

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>23 December 2004</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>20-32</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>20-32</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This action is responsive to communications: Petition to Revive, filed on 4/11/05.

2.   Claims 20-32 are pending in the case. Claims 20-22 are independent claims.

Claims 1-19 have been previously canceled.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 20-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Benjamin Clifton et al., U.S. Patent 6,388,648, 5/2002 and further in view of Curtis

Priem, U.S. Patent 5,805,175, 9/1998.

As per independent claim 20, Clifton discloses a data source storing display

information (Fig. 2 "14"), a gamma correction block coupled to the data source (col. 10,

II. 16-20), storing a plurality of sets of precomputed gamma corrected data (col. 10, II.

23-27), the gamma correction block receiving the display information and gamma

selection information (i.e. a controller makes a selection of desired color balance data

from among sets of lookup tables) (col. 10, II. 21-27), and providing gamma corrected

data in response to the display information from a gamma correction curve selected by

the gamma selection information (i.e. a selected table from among a plurality of ROM

lookup tables are provided based on the received RGB input data) (col. 10, ll. 25-28),

and a digital to analog converter coupled to the gamma correction block (Fig. 8), the

DAC receives the gamma corrected data and generates an analog display signal (i.d. a

DAC, digital to analog converter, receives the corrected values and provides the

corresponding signal to the display) (col. 10, ll. 27-28), outputting the analog display

signal (Fig. 10 "102-104").

Clifton fails to specifically disclose a frame buffer, a gamma correction block

coupled to the frame buffer and receiving the display information from the frame buffer.

Clifton teaches supplying input data from a source and a display controller for

accessing a look up table storing gamma corrected data values that are applied to the

input data to improve the display characteristics (col. 10,ll. 20-32).

Priem teaches providing pixel data from a frame buffer that indexes a lookup

table to provide gamma corrected color data that matches a particular display color (col.

7, ll. 55-67).

It would have been obvious to one of skill in the art to include Priem's frame

buffer providing data to a look up table that outputs gamma corrected data with the color

balancing system of Clifton because the look up table is provided input data values from

a source and a frame buffer is a source that provides stored input data.

As per independent claim 21, Clifton discloses a video graphic processor

operably coupled to the frame buffer and generates at least a portion of the display

information stored in the frame buffer (Fig. 2). The rationale as applied in the rejection of

claim 20 applies herein.

As per independent claim 22, Clifton discloses receiving pixel information (col.

10, II. 24), selecting a set of gamma corrected data from a plurality of sets of

precomputed gamma corrected data based on pixel and gamma selection information

(col. 10, II. 21-27), the plurality of gamma corrected data corresponding to a plurality of

gamma correction curves (col. 10, II. 24-27, 35-40; Fig. 7) and converting the set of

gamma corrected data from a digital format to a portion of an analog display signal (Fig.

8; col. 10, II. 27-29) and outputting a digital display signal including the gamma

corrected data and the analog display signal (Fig. 10 "120-104"). Clifton fails to

specifically disclose the pixel information is generated from display information within a

frame buffer, which Priem discloses (Fig. 2 "25").

Clifton teaches receiving data from a video signal source (Fig. 2).

Priem teaches transferring data from the frame buffer to the lookup tables (col.

12, II. 21-30).

It would have been obvious to one of ordinary skill in the art to incorporate

Priem's generation of pixel data from data within a frame buffer with the disclosure of

Clifton to provide a specific source from which to retrieve pixel data.

As per dependent claims 23 and 28, Clifton discloses a plurality of gamma

correction lookup tables (col. 10, ll. 24) corresponding to a plurality of gamma values

(col. 10, ll. 24-27), wherein each of the plurality of lookup tables provides a set of

output data in response to received input data (col. 10, ll. 24-27); and a gamma table

selector that receives the set of output data and automatically selects the set of output

data corresponding to one of the plurality of lookup tables (col. 10, ll. 21-27), wherein

the automatic selection of the set of output data is based on the gamma selection

information (col. 10, ll. 21-24), in view of Priem.

As per dependent claims 24 and 29, Clifton discloses wherein the precomputed

gamma corrected data includes a pass through function, wherein the pass through

function provides the display information as the set of gamma corrected data (i.e.

luminance may be adjusted and the adjustment process repeated; and the data not

requiring processing is not processed) (Fig. 8; col. 9,ll. 25-30, 65-67) in view of Priem.

As per dependent claims 25 and 30, Clifton discloses wherein the gamma

correction curve maps values of the display information to output values on the gamma

correction curve (Fig. 7; col. 10, ll. 24-27, 35-40) in view of Priem.

As per dependent claims 26 and 31, Clifton discloses wherein a set of pixel data

is provided as the display information to each of a plurality of gamma correction tables

(col. 10, ll. 23-26), and wherein a gamma table selector includes a multiplexor that

receives the sets of output data from the plurality of gamma correction lookup tables

(i.e. lookup table accessed by multiplexing techniques) (col. 8, II. 63-66; col. 10, II. 20-

27), wherein the multiplexor selects a selected set of output data from the sets of output

data based on the gamma selection information (col. 10, II. 24-27), in view of Priem.

As per dependent claims 27 and 32, Clifton discloses wherein the gamma

correction tables are memory structures addressed by the received input data (col. 10,

II. 23-27) in view of Priem.

Response to Arguments

3.   Applicant's arguments filed 12/23/04 have been fully considered but they are not persuasive.

Applicant argues Clifton fails to disclose a frame buffer, wherein the frame buffer stores display information and the gamma correction block receives the display information from the frame buffer.

In reply, Clifton teaches supplying input data from a source and a display controller for accessing a look up table storing gamma corrected data values that are applied to the input data to improve the display characteristics (col. 10,ll. 20-32). Priem teaches providing pixel data from a frame buffer that indexes a lookup table to provide gamma corrected color data that matches a particular display color (col. 7, ll. 55-67). It would have been obvious to one of skill in the art to include Priem's frame buffer providing data to a look up table that outputs gamma corrected data with the color balancing system of Clifton because the look up table is provided input data values from a source and a frame buffer is a source that provides stored input data.

Applicant argues Priem does not disclose a gamma correction block.

In reply, Priem teaches a look up table that manipulates bits of color data to

provide gamma corrected color data that matches a particular display color (col. 7, ll.

55-67). Therefore, the look up table of Priem corresponds to a gamma correction block.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chante Harrison whose telephone number is 571-272-7659. The examiner can normally be reached on Monday, Tuesday and Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 571-272-3638. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chante Harrison
Examiner
Art Unit 2677

July 7, 2005

CHANH NGUYEN
PRIMARY EXAMINER